

Notice of Allowability

Application No.

10/024,010

Examiner

David H Kruse

Applicant(s)

WILLIAMS ET AL.

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment filed 17 February 2004.
2. ☒ The allowed claim(s) is/are 1-9 and 35-48.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☒ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>SAME</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input checked="" type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR § 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert Jondle on 21 April 2004.

The application has been amended as follows:

At claim 1, "Seed" has been amended to read -- A seed --.

At claim 2, "parts" has been amended to read -- a part --.

At claim 5, line 1, "parts" has been amended to read -- a part --.

At claim 7, -- produced -- has been inserted after "cells".

Claim 8 (AMENDED) The tissue culture according to claim 7, wherein the cells of the tissue culture are produced from a tissue selected from the group consisting of leaves, pollen, embryos, roots, root tips, anthers, silks, flowers, kernels, ears, cobs, husks, and stalks.

Claim 9 (AMENDED) A corn plant regenerated from the tissue culture of claim 7, wherein the [regenerated] corn plant [having] has all of the morphological and physiological characteristics of inbred line HC53, representative seed of said line having been deposited under ATCC Accession No. PTA-_____.

CLAIMS 33 AND 34 HAVE BEEN CANCELLED.

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Claim 41 (AMENDED) A method of producing a disease resistant corn plant comprising transforming the corn plant of claim 2 with a transgene that confers disease resistance, wherein the resistance is to a bacterial disease, fungal disease or viral disease.

Claim 43 (AMENDED) A method of introducing a desired single gene trait into corn inbred line HC53 comprising:

(a) crossing [the] a HC53 plant[s], [grown from] representative seed having been deposited under ATCC Accession No. PTA-____, with a plant[s] of another corn line that comprise a desired single gene trait to produce F1 progeny plants, wherein the desired single gene trait is selected from waxy starch, male sterility, herbicide resistance, insect resistance, [corn endosperm and resistance to bacterial, fungal or viral disease] bacterial disease resistance, fungal disease resistance or viral disease resistance;

(b) selecting F1 progeny plants that have the desired single gene trait to produce selected F1 progeny plants;

(c) crossing the selected F1 progeny plants with [the] a HC53 plant[s] to produce first backcross progeny plants;

(d) selecting for first backcross progeny plants that have the desired single gene trait and physiological and morphological characteristics of maize inbred line HC53 to produce selected first backcross progeny plants; and

(e) repeating steps (c) and (d) one or more times in succession to produce selected second or higher backcross progeny plants that comprise the desired single

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gene trait and all of the physiological and morphological characteristics of maize inbred line HC53 as described in the Variety Description Information [and as determined at a 5% significance level] when grown in the same environmental conditions.

Claim 44 (AMENDED) A corn plant produced by the method of claim [1] 43, wherein the corn plant has the desired single gene trait and all of the physiological and morphological characteristics of corn inbred Line HC53 as described in the Variety Description Information[and as determined at a 5% significance level] when grown in the same environmental conditions.

45 (NEW) A method of producing a corn plant with decreased phytate content comprising transforming the corn plant of claim 2 with a transgene that encodes phytase.

46 (NEW) A corn plant produced by the method of claim 45 having reduced phytate.

47 (NEW) A method of producing a corn plant with modified fatty acid metabolism or modified carbohydrate composition comprising transforming the corn plant of claim 2 with a transgene that modifies fatty acid metabolism or modifies carbohydrate composition, wherein the transgene encodes an enzyme selected from the group consisting of fructosyltransferase, levansucrase α -amylase, invertase, and a starch branching enzyme, or the transgene encodes the antisense of a steryl-ACP desaturase gene.

48 (NEW) A corn plant produced by the method of claim 47 having modified fatty acid metabolism or modified carbohydrate composition.

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2. Applicant approved the amendments to the claims and entry to new claims directed to subject matter of deleted claims 33 and 34, see attached Interview Summary.

REQUIREMENT OF ALLOWANCE UNDER 37 CFR §§ 1.801-1.809

3. The Deposit Statement in the response filed 17 February 2004, page 7, is deemed in accordance with 37 CFR §§ 1.801-1.809. Since the application is otherwise in condition for allowance except for the needed deposit of seed, and since the Office has received written assurance that an acceptable deposit will be made on or before payment of the issue fee, the Office is authorized to mail Applicant a Notice of Allowance and Issue Fee Due together with a requirement that the needed deposit be made within THREE (3) MONTHS of the mail date of this letter (see 37 CFR § 1.809(c)).

As set forth in 37 CFR § 1.809(c), Applicant is required to deposit 2500 seeds of the claimed plant within THREE (3) MONTHS of the mail date of this letter; thus the time for making the deposit is on or before the payment of the issue fee.

Applicant is reminded that once the deposit of seed has been made, information regarding the date of deposit, description of the deposited material including number of seeds deposited, name and address of the depository, and the accession number must be added to the specification in order to comply with 37 CFR § 1.809(d). In addition, the claims must be amended to replace the blank " _____ " with the appropriate Accession Number. Amendments to the specification and the claims must be filed under 37 CFR § 1.312.

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David H. Kruse, Ph.D. whose telephone number is (571) 272-0799. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Amy Nelson can be reached at (571) 272-0804. The fax telephone number for this Group is (703) 872-9306 Before Final or (703) 872-9307 After Final.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (571) 272-0547.

A handwritten signature in black ink, appearing to read "David H. Kruse". The signature is fluid and cursive, with the first name "David" being more prominent and the last name "Kruse" following in a similar style.

David H. Kruse, Ph.D.
22 April 2004